Navajo and EPA Superfund Programs Meeting - Tronox
January 20-23rd, 2015 – Albuquerque, New Mexico

January 2015 – Tronox related meetings

Meeting #1 (NNEPA and R9) – Tronox Program

Date and Time: Wednesday 1/21/15 (8:30 am to 5:00 pm)

Location:
Southwest Regional Office
1001 Indian School Road, NW
Albuquerque, NM 87104

Facilitator: Lori Lewis

Participants (see attached sign-in sheet):

- **Opening**
  - Welcome/Introductions/Review attached agenda (All)
  - Agenda and Logistics review (Chip Poalinelli and Lori Lewis)
  - Questions to consider as we proceed with these meetings (Lori Lewis)
    - Why are we doing this work? (i.e. Tronox Settlement, individual agency interests, and common interests)
    - How will we work together? (i.e. guiding principles and specific agreements)
    - What is the work? (i.e. Tronox Settlement, FY2015 work, and future collaboration)

- **Tronox Settlement Status/Overview and Budget/Cost Summary**– *Big Picture* Chip Poalinelli and Laurie Williams provided updates on the following:

  - Update on Status and Immediate Next steps

    On April 3, 2014, the United States entered into a settlement agreement with Anadarko Petroleum Corporation that has been approved by the U.S. District Court and the deadline to appeal the final order is January 20th, 2015. The settlement is expected to provide almost $1 billion for cleanup of "Navajo Area Uranium Mines" on and very near the Navajo Nation near Cove, Arizona and Ambrosia Lake, New Mexico.

    If no appeal is filed by January 20, 2015, Anadarko's payment to the Anadarko Litigation Trust will be due **on January 23, 2015**.

    If there is an appeal, the appeal process will have to play out and the funds will not be available until the appeal process is completed.

  - Settlement Presentation and clarifying questions (see power point presentation - *Overview of the Tronox Settlement And Budget/Costs Summary*)

- Review of cost and budget (see power point presentation - *Overview of the Tronox Settlement And Budget/Costs Summary*)

  Question(s) and/or Comments

  1. Could other sites (i.e. transfer stations) be investigated and remediated using Tronox funds? Laurie Williams stated that the funds could be used if they are determined to be Tronox related.

- **Tronox Mines Overview** Chip Poalinelli provided a presentation on mines and the "other sites" list (see power point presentation – *Tronox Settlement Mine Overview)*

  Questions(s) and/or Comments

  1. Need to develop a process/criteria for identifying duplicate mines.
  2. Additional sites may be added to the list of Navajo Area Uranium Mines from Attachment B of settlement. We have identified six mines from Attachment B that may be added to the 50 mine list (Brodi, Henry Philips, Knife Edge Mesa, Mesa ½ West, Mesa II Pit, and Mesa 4 West)
  3. Linda Reeves will continue investigate mines listed in Attachment B. Laurie Williams will take the lead on informing and the decision making process. Focusing on transparency.

- **FY15 Proposed work** Outcomes: Shared understanding of past, current and potential future 2015 work. Identification of specific activities and roles and responsibilities. Identify opportunities for community involvement including local labor, training, and contracting.

  <u>Specific Project Updates</u>
  - ASPECT Fly over preliminary results (Randy Nattis)

    Randy Nattis graphically when through the preliminary results of the recent ASPECT survey.

    The proposed survey will consist of using the ASPECT System to conduct a 110 square mile gamma radiological survey and generate a set of radiological products that will be used to locate and assess areas of radiological contamination. A review of topographic maps for the region indicates this area is a mixture of flat terrain on the eastern portion and mountainous terrain on the western portion. A number of mines are located in the southwestern and western portions of the survey area.

    The purpose of this survey will be to document, through airborne gamma spectral data, the effective one meter dose rate, total airborne gamma count, and uranium concentration of the environment within the survey area. To accomplish this survey, a set of regular spaced lines will be flown at a fixed above ground altitude using a constant ground speed. All data will be processed by taking into consideration both cosmic radiation inputs coupled with an aircraft specific calibration function to produce calibrated radiological products. It is estimated that the survey will require four to five days to complete with

interim product generation being accomplished at the end of each flight (cost $100,000 FY2015).

Questions and Comments:

1. Can we determine background from the flyover? No, but it will direct where and where not to go.
2. How much can Aspect delineate background? Not really, most is ground truthing.
3. What are the areas and number of samples used for background in each area? Randy will provide an update once established.

- Data Management (Randy Nattis)

EPA OSC Randy Nattis tasked START with provided a user needs assessment and ultimately developing use cases and requirements for creating a data management portal for the Tronox Sites. START was tasked with the following:

- Create questions to help stimulate thought process and interview process with the users base;
- Interview the list of users provided by OSC Nattis;
- Compile interview notes and create use cases;
- Send the use cases out for review to the users base to finalize them;
- Create a Project Work Plan and Requirements based on the uses cases; and
- Provide CPW for building the system based on the Project Work Plan and Requirements.

Cost estimate ($200,000 FY 2015) assumes that START will interview 22 personnel and that from those interviews we will generate 50 use cases to drive our requirements. This estimate is based on historic User Assessments that START has previously conducted along with an understanding on the size and scope of the project to support the proposed system. It also assumes that the interview process will be conducted via conference calls and/or Webinars.

- Cove Area Assessment (Wilson Yee)

Wilson Yee went over the proposed Cove Watershed Assessment project for 2015 (See attached - Cove Watershed Historical Samples.pdf and Cove Watershed Proposed Sampling.pdf).

This project includes the first phase of the Cove Watershed Assessment, which will investigate the extent of contamination throughout the Cove Wash, as a result of historic uranium mining operations in the area. Surface water, sediment, and groundwater migration pathways will be investigated during this phase. Limited subsurface sample may also be collected, to a depth approximately 18-inches. Seeps and springs encountered during the assessment will also likely be sampled to further identify potential contamination sources and pathways. – Cost estimate $1,200,000.

Questions and Comments:

1. Site assessment activities have been identified as good opportunities to provide local community training, contracting, and internship in the Cove area.
2. Consider grants with local universities (i.e. field resources).
3. Cove Chapter has requested more visuals, schedules, and updates on field activities. EPA has agreed to create an EPA bulletin board.
4. EPA plans to hire a Community Outreach Coordinator that is bilingual who will be a local POC to the community.

- EE/CA Section 32 and 33 Mines (Chip Poalinelli)

  At the Section 32 mine (located on the Navajo reservation), there is a mine waste pile and an unfenced deep mineshaft at the southeast portion of the site. At the Section 33 mine (located off the reservation), there are mining waste piles. EPA R9 performed an interim action at Section 32 to consolidate waste away from a residence. EPA R9 did not do any work at the Section 33 mine. Next steps would be to conduct a Removal Site Evaluation at Section 33, supplement the data already collected for Section 32, then write EE/CAs for the two sites (Cost $200,000 FY2015).

- Quivira ongoing activities-e.g. Finalizing EE/CA, Community Involvement, interim removal, and structural testing of the RWPR bridge (EPA/NEPA) (Chip Poalinelli)

  The draft EE/CA is complete. In general, our options at Navajo AUMs are:
  – Consolidate and cover onsite;
  – Excavate and transport to a yet-to-be-created waste consolidation area;
  – Excavate and transport to an existing licensed low-level rad waste landfill.

  Field work this year:
  – Another interim removal to excavate approximately 1000 cy. of contaminated soil around two vent holes and place on the main waste pile.
  – Structural testing of the RWPR bridge in the community and start the process of a removal action to either repair or replace the bridge. The bridge is currently an extreme hazard and is the community's primary concern.

  Cost ~$400,000 FY2015

  Question and/or Comment:

  1. Mark will provide a more comprehensive update on Quivira at the next NNEPA/EPA meeting or during the weekly calls.

FY 2015 Projects:

1. Aspect flyover work - continue the Aspect flyover work in the cove area (estimated cost $100,000 already obligated in the cost and budget summary presented earlier)
2. Data Management project – the data management user assessment should proceed (estimated cost $200,000 already obligated in the cost and budget summary presented earlier). Once the user assessment phase is complete Randy will provide a cost estimate for the next phase of the data management project.
3. Cove Area Assessment Project – proceed with that the Cove Area assessment project. The first phase of the project will be a sampling work plan, community involvement, and cultural resources assessment/endangered species assessment (estimated contracting costs are $950,000). Wilson will provide a revised contracting and labor estimated after the sampling work plan is finalized.
4. EE/CA Section 32 and 33 Mines – the EE/CAs for Sections 32 and 33 mines should proceed estimated cost $200,000)
5. Quivira ongoing activities-e.g. Finalizing EE/CA, Community Involvement, interim removal, and structural testing of the RWPR bridge – Quivira ongoing activities at the Quivira mine should proceed (estimated cost $400,000)

Question and Comments

1. As we proceed with these projects, we all agree to make sure that we don't do rework (i.e. historical information is identified and reviewed)
2. For replanting efforts and erosion control project staff should consult with Cassandra and NRD

- **"Next Steps" Strategic Development Plan** Chip Poalinelli provided a presentation on the following (see power point presentation – *Tronox Settlement Next Steps):*

    - Outlined the proposed "Next Steps" essential for the effective utilization of the anticipated settlement funds to address the contamination at the Tronox NAUM. Through informal and formal consultation, the USEPA and Navajo Nation EPA will continue their ongoing process of prioritizing response actions for the Tronox NAUM and will determine lead responsibility for response action(s) at each Tronox NAUM.

    - These proposed "Next Steps" will be further expanded and priorities will be established through formal and informal consultation with the Navajo Nation, Intra-agency coordination, Inter-agency collaboration, and communication and outreach.

    Questions and Comments:

    1. Consultation and Communication Plan - Include levels and process for input on decision making (i.e. roles and hierarchy of decisions) and include impacted communities.
    2. Develop Key Messages – NNEPA and USEPA will work on this together so a common and consistent message to the community.
    3. Identify any lessons learned from the 5 Year Plan.

4. Identify possible training for agency and community members.
5. Website/Communication – Communication is an ongoing effort with chapters and website updates could be used at Chapters meetings.
6. Data Quality Objectives – Be aware that sometimes there can be difficulty in accessing other data systems.
7. Develop Conceptual Site Models – Consider signage.
8. Document Control – Need to include file naming protocol.

- **Meetings 2 &3 Preparation (All)**
  - Reviewed and clarified agendas and goals for each meeting.

- **Closing (All)** Review Action Items and Closing Comments - Summary of Action Items and 2105 Work Planed Updates (**Meeting #1 Action Items and Comments**):
  - Follow-up on past transport locations (i.e. conversations with man on Climax Station) to see if they could be addressed. (Cassandra and Dave Taylor – Due in February 2015)
  - Send OMB circular to Laurie Williams (Frieda – By end of February 2015)
  - Clarify – Are indirect costs applied with cleanup funds? (Laurie Williams – After OMB circular received)
  - Prioritization – Prioritization schemes should include impacts to drinking water sources and/or livestock water sources.
  - Identify duplicate criteria and evaluate list (Chip and Linda – May 2015, provide updates at biweekly calls and quarterly meetings)
  - Give update on Quivira (Mark – next NNEPA call)
  - Revise Next Document (Chip – March 30th, 2015)

Meeting #2 (NNEPA, R9, and AML) – Tronox Program

Date and Time: Thursday 1/22/15 (8:00 am to noon)

Location:
Southwest Regional Office
1001 Indian School Road, NW
Albuquerque, NM 87104

Facilitator: Lori Lewis

Participants (see attached sign-in sheet)

- **Opening**
  - Welcome/Introductions/Review attached agenda (All)
  - Agenda and Logistics review (Chip Poalinelli and Lori Lewis)

- **Tronox Settlement Status**– *Big Picture* Chip Poalinelli and Laurie Williams provided updates on the following:

  - Update on Status and Immediate Next steps
    On April 3, 2014, the United States entered into a settlement agreement with Anadarko Petroleum Corporation that has been approved by the U.S. District Court and the deadline to appeal the final order is January 20th, 2015. The settlement is expected to provide almost $1 billion for cleanup of "Navajo Area Uranium Mines" on and very near the Navajo Nation near Cove, Arizona and Ambrosia Lake, New Mexico.

    No appeal was filed by January 20, 2015, Anadarko's payment to the Anadarko Litigation Trust is due **on January 23, 2015**.

  - Settlement Presentation and clarifying questions (see power point presentation - *Overview of the Tronox Settlement*)

- **Tronox Mines Overview** Chip Poalinelli provided a presentation on the following:
  - Provide information on mines and "other sites" list (see power point presentation – *Tronox Settlement Mine Overview).*

- **Overview of current expertise and resources** Melvin Yazzie provided a presentation on the following:
  - Overview of AML (see power point presentation – *2015 Navajo AML Dept. Update1 AUM ABQ 012215.pptx).*

- **2015 Tronox work** Shared understanding of past, current and potential future 2015 work. Identification of specific activities and roles and responsibilities. Identify opportunities for community involvement including local labor, training, and contracting.

Specific Project Updates

- ASPECT Fly over preliminary results (Randy Nattis)

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encountered during the assessment will also likely be sampled to further identify potential contamination sources and pathways.

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  – Structural testing of the RWPR bridge in the community and start the process of a removal action to either repair or replace the bridge. The bridge is currently an extreme hazard and is the community's primary concern.

  Comments and Questions:

  1. EPA will reconnect with the Chapter houses regarding the missing Atlases and what information is in Atlas and how to use the information (NNEPA/EPA team)

- **Closing/Identify next steps and Possibilities for Working Together (Meeting #2 Action Items and Comments)**
  - Look into making sure coordinate systems and data are updated and consistent (Randy and Melvin – On going as the data management project progresses)
  - Share AML presentation with entire USEPA Navajo Team (Chip – March 2015)
  - Clancy and Will will work with the Region 9 team to identify specific areas/projects where AML resources/expertise can be used (Clancy – Check-in with AML by late February 2015)
  - Explore possibility of collocating Region 9 personnel in the AML Shiprock and other offices (i.e. Tuba City) (USEPA/AML – ongoing as fieldwork needs increase)
  - Include presentations, org charts, and contact list in notes (Chip – with meeting notes)
  - Region 9, NNEPA, and AML continue to work on Cove activities (team – ongoing)

Meeting #3 (NNEPA, R9, R9, New Mexico, and AML) – Tronox Program

Date and Time: Thursday 1/22/15 (1:00 pm to 5:00 pm), Friday 1/23/15 (8:00 am – noon)

Location:
Southwest Regional Office
1001 Indian School Road, NW
Albuquerque, NM 87104

Facilitator: Lori Lewis

Participants (see attached sign-in sheet)

- **Opening (All)**
  - Welcome/Introductions/Review attached agenda (All)
  - Logistics review (Lori Lewis)
    - Neutral facilitator
    - Time keeper/process guide
    - Record using your words

- **Review and Clarification of Agency Interests and Needs (All)**
  All attendees broke out in groups by agency to identify common and individual agency's interests and needs. The following are common and individual interests:

  - USEPA Region 9
    - Long-term Protection of Human Health and the Environment
    - Effective prioritization
    - Early measurable success
    - Benefits to Navajo Nation's people
    - Accountability on how funds are spent
    - Jobs and capacity building
    - Transparency and Community Involvement
    - Partnering with Stakeholders
    - Consistency on technical procedures and standards (e.g. SOPs and cleanup standards)
    - Creating a model for Uranium mine clean-up

  - Navajo AML
    - Community satisfaction (Cove) – mission statement, values, expectations
    - SMCRA – policy, work experience/physical safe, limited – PEP - impact
    - Partnership – maintain/develop
    - GIS Database – sharing information, don't reinvent the wheel, work history
    - Funding – AML money spent, land use plans
    - Economic Development – money stays on Navajo Nation, businesses, workforce, infrastructure
    - Navajo Nation Presence, DNR – still here for the communities

  - USEPA Region 6
    - Protection of Human Health and the Environment

- Coordinated complementary efforts (integrate into ongoing work)
- Addressing all exposure pathways (air, soil, dust, grazing, surface, and groundwater, etc.)
- Protection of water resources for residents of New Mexico in the Navajo Area.
- Use resources effectively and efficiency.

- New Mexico Mining and Minerals
  - Surface reclamation (Site currently under permit, AML, Prior reclaimed mines)
  - Area knowledge base, resources and experience
  - Drivers – return land to beneficial use (Protection of human health and environment, return mine lands to self-sustaining ecosystem (New Mexico Mining Act)

- New Mexico Environmental Department – Groundwater Quality Bureau
  - Identify and address impacts to groundwater, surface water, vadose zone (meet standards and restore NM resources to protect human health and the environment)
  - Identify and address impacts to private drinking water well – address impacts to human health and the environment.
  - Source Control (surface features) – multiple exposure pathways – radon, leachate, gamma.
  - Regional Plan to address all of the above.

- Navajo Nation EPA
  - Protect Dine' people
    - human
    - animal/food web
    - plants
  - Protect the Environment
    - contamination migration
    - remediation
    - water
    - air/radon
  - Land Usage
    - livestock
    - structures
    - reuse of land and water (surface and ground water)
  - Cultural
    - our way of life
    - biota

  - Prevention
    - outreach and education
    - prevent exploitation
    - mining hazards
    - partnership

- List of Common Interests for all Agencies
  - Protect human health and the environment
  - Protect water resources
  - Protect and preserve cultural and natural resources
  - Transparency and community involvement
  - Consistency
  - Land reuse

- **Overview of Tronox settlement** – *Big Picture* Chip Poalinelli and Laurie Williams provided updates on the following:

  - Update on Status and Immediate Next steps
    On April 3, 2014, the United States entered into a settlement agreement with Anadarko Petroleum Corporation that has been approved by the U.S. District Court and the deadline to appeal the final order is January 20th, 2015. The settlement is expected to provide almost $1 billion for cleanup of "Navajo Area Uranium Mines" on and very near the Navajo Nation near Cove, Arizona and Ambrosia Lake, New Mexico.

    No appeal was filed by January 20, 2015, Anadarko's payment to the Anadarko Litigation Trust will be due **on January 23, 2015**.

  - Settlement Presentation and clarifying questions (see power point presentation - *Overview of the Tronox Settlement*)

- **Tronox Mines Overview (Chip Poalinelli)** Chip Poalinelli provided information on current list (Reviewed and clarified total mines identified in the settlement. Present mines known to be on Navajo Nation, mines known not to be on Navajo Nation, other mines, and mines we have names but just don't have information.) Chip Poalinelli provided a presentation on the following: Provide information on mines and "other sites" list (see power point presentation – *Tronox Settlement Mine Overview).*

- **Working together on Tronox Mine Clean-up (All)** Identify guiding principles for our future work together (e.g. communication, coordination, decision making and roles and responsibilities). Include where appropriate specifics regarding mines located on the Navajo Nation verses off nation in New Mexico/Region 6. The group was divided into four Teams to identify guiding principles for our future work:

  - Team #1
    - Respectful/Open Communication
      - Sharing information/resources
    - Commitment
      - Common goals/mission
      - Respect the uncommon goals
      - Planning and Management
    - Not Take It Personally
      - Deal with it
      - Reestablish Common Goals
      - Manage Up and Down

- Regroup
  - Bike rack
  - Change the scenery/content
- Meet at Cleanup Site
  - Identify milestones
  - Timeliness and efficient work
  - Community approval
  - Recognition
  - High 5

- Team #2
  - Respectful
  - Coordination
  - Be flexible/reassess
  - Be supportive
  - Ensure community ownership and inclusiveness
  - Communicate up/down/out

- Team #3
  - Document Consistency
    - QA/QC
    - DQOs
    - Software
  - Effective Communication/Collaboration
    - Be respectful
    - Be open and honest
    - Listen
    - Be responsive
    - Don’t make assumptions
    - Accept constructive criticism
  - Develop Communication Strategy
    - Be consistent
  - When things go wrong
    - Own it!
    - Hot wash - A **hot wash** is the "after-action" discussions and evaluations of an agency's (or multiple agencies') performance following an exercise, training session, or major event, such as Hurricane Katrina.
    - Assume best of each other
    - Regroup, recourse
    - Don’t wait and report to lead
  - Share food and drink

- Team #4
  - Cooperate within CERCLA and the settlement
  - Identify the right people to accomplish the work
  - Open, honest communication (no secrets)
  - Be willing to compromise
  - Develop a commonality of terms and technical application

- Develop and achieve milestones to approach success

- **2015 Tronox work (All)** Identify overall key/common goals and considerations for making decisions on Tronox work for 2015/future. What other things does this group need to consider in 2015 as we decide on and do Tronox work? (group discussion)

  - Explore ground water issues especially in Ambrosia Lake area. For example: how it flow and the influence from Tronox and other mines
  - Opportunity to combine cleanup (waste consolidation)
  - Define sites and issues
  - Look at overall impacts not just human health
  - Balancing this Tronox work with our "other work" (resources)
  - Consistency of our work
  - Weather concerns (e.g. snow and construction)
  - Political concerns (Navajo government)
  - Changes in staff
  - How can we tap into our collective institutional knowledge
  - Keep up with new technology
  - Travel time considerations
  - Evaluate data gaps and gather information
  - Regional perspective – analyze Tronox in view of larger region
  - Drinking water – now and future uses and impacts
  - Look at immediate risks – Are there acute risks that we need to address?
  - Continue work that we are already doing
  - Apply criteria consistency
  - Prioritize sites that we know about

  Outcome - The group agreed that all of considerations should be incorporated into future planning and implementation documents.

- **Identify potential projects for FY2015** Shared understanding of past, current and potential future 2015 work. Identification of specific activities and roles and responsibilities. Identify opportunities for community involvement including local labor, training, and contracting.

  <u>Specific Project Updates</u>

  - ASPECT Fly over preliminary results (Randy Nattis)

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Questions and Comments:

1. Important to integrate this information into our other work.
2. Use our "experts" (AML/Melvin, Bill C.)

- Data Management (Randy Nattis)

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1. Identify a point of contact for each agency. (Randy)

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uranium mining operations in the area. Surface water, sediment, and groundwater migration pathways will be investigated during this phase. Limited subsurface sample may also be collected, to a depth approximately 18-inches. Seeps and springs encountered during the assessment will also likely be sampled to further identify potential contamination sources and pathways. – Cost estimate $1,200,000.

Questions and Comments:

1. Look at graduates from Superfund job training program and Brownfield job training.
2. Encourage New Mexico to look at Brownfield job training grant and R6 grants.
3. Be considerate of Chapters concerns regarding accessibility for locals to training locations (e.g. if the location is far away it is difficult to get there)

- EE/CA Section 32 and 33 Mines (Chip Poalinelli)

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Question and/or Comment:

1. Mark will provide a more comprehensive update on Quivira at the next NNEPA/EPA or during the weekly calls.

- Grants Mineral District Groundwater Investigation (Lisa Price)

  Purpose: To strategically build on the understanding of impacts of mining and milling on the surface and ground water in the Grants Mining District and the risks to human health through the development of a conceptual site model. The conceptual site is key to understanding the impacts of mining on the San Mateo Creek Basin (SMCB), the current exposures, and in developing and implementing a plan of action to address contaminated drinking water.

  Background: EPA Region 6 initially investigated groundwater quality impacts from mining and milling in the Grants Mining District at the request of New Mexico agencies in 1975. Since then, New Mexico agencies have continued to monitor municipal drinking water sources, and with funding provided by EPA Region 6, the New Mexico Environment Department (NMED) has been sampling existing private groundwater wells from 2008 to present day. These wells are located in the SMCB where there isn't access to municipal water sources and most of the groundwater wells have concentrations of radionuclides above drinking water standards whether completed in the alluvium or in the Dakota Sandstone aquifer.

  In 2014, EPA Region 6 initiated an alluvial groundwater investigation in the SMCB using site assessment and enforcement dollars (totaling approximately $500,000). The intent of the investigation was to attempt to determine background groundwater quality in the alluvium and to attempt attribution to certain mines ("wet mines") where groundwater was discharged to the surface in very large volumes, allowing access uranium-containing ore bodies.

  Activities in 2015:
  - Sampling of alluvial groundwater wells installed in 2014 in Spring and Fall in order to catch snow melt and post-monsoon groundwater conditions – cost estimate $130,000
  - Installation of additional alluvial groundwater wells (10) to further attribution to certain mines and mine activities and sampling in Spring and Fall in order to catch snow melt and post-monsoon groundwater conditions – cost estimate $315,000
  - Installation of bedrock wells into the Dakota Sandstone (8) in the Ambrosia Lake area where the Dakota Sandstone aquifer subcrops in the alluvium, with one round of sampling upon completion of well development – cost estimate $955,000.

  Question and/or Comment:

  1. Site assessment model – Connect different sources and cleanup (make sure cleaned up sources are not decontaminated).
  2. Work with Navajo to identify any additional wells (private)

- Mine Site Evaluation (Lisa Price and Warren Zehner)

  Purpose: To investigate and propose alternatives to mitigate, reduce, or eliminate the potential for human or ecological exposures to mining-related uranium contaminated waste at the Section 35 and 36 Mine Sites.

Background: Mine activities began at the Section 35 and 36 Mines in 1958 and ceased in 2005, with approximately 2.5 million tons of uranium ore produced. Since the uranium-containing ore body is approximately 700 feet below ground surface, millions of gallons of groundwater were pumped from the mine shafts and discharged to arroyos and area surface water streams, thus increasing the acreage impacted from mining activities. The total area impacted at the Section 35 and 36 Mine Sites is approximately 600 acres and radiation has been measured at more than 100 times above background levels.

Proposed Activities in 2015:

– Field investigation, data interpretation, and development and evaluation of actions to address unacceptable risk – cost estimate $1,800,000.

Question and/or Comment:

1. Need to do more community involvement
2. Coordinate with Navajo

Summary of FY2015 Projects:

1. Aspect flyover work - continue the Aspect flyover work in the cove area (estimated cost $100,000 already obligated in the cost and budget summary presented earlier)
2. Data Management project – data management user assessment should proceed (estimated cost $200,000 already obligated in the cost and budget summary presented earlier). Once the user assessment phase is complete Randy will provide a cost estimate for the next phase of the data management project.
3. Cove Area Assessment Project – proceed with that the Cove Area assessment project. The first phase of the project will be a sampling work plan, community involvement, and cultural resources assessment/endangered species assessment (estimated contracting costs are $1,200,000). Wilson will provide a revised contracting and labor estimated after the sampling work plan is finalized.
4. EE/CA Section 32 and 33 Mines – EE/CAs for Sections 32 and 33 mines should proceed estimated cost $200,000)
5. Quivira ongoing activities-e.g. Finalizing EE/CA, Community Involvement, interim removal, and structural testing of the RWPR bridge – Quivira ongoing activities at the Quivira mine should proceed (estimated cost $400,000)
6. Grants Mineral District Ground Water Investigation - The project to strategically build on the understanding of impacts of mining and milling on the surface and ground water in the Grants Mining District and the risks to human health through the development of a conceptual site model should proceed with following activities:
    a. Sampling of alluvial groundwater wells installed in 2014 in Spring and Fall in order to catch snow melt and post-monsoon groundwater conditions – cost estimate $130,000
    b. Installation of additional alluvial groundwater wells (10) to further attribution to certain mines and mine activities and sampling in Spring and Fall in order to catch snow melt and post-monsoon groundwater conditions – cost estimate $315,000
    c. Installation of bedrock wells into the Dakota Sandstone (8) in the Ambrosia Lake area where the Dakota Sandstone aquifer subcrops in the alluvium, with

one round of sampling upon completion of well development – cost estimate $955,000.

d. Mine Site Evaluation – The project to investigate and propose alternatives to mitigate, reduce, or eliminate the potential for human or ecological exposures to mining-related uranium contaminated waste at the Section 35 and 36 Mine Sites should proceed with the following activity: Field investigation, data interpretation, and development and evaluation of actions to address unacceptable risk – cost estimate $1,800,000.

Based on the support and comments during these meeting EPA has approved the above projects for FY2015. The following process will be established to memorialize approval of future projects and/or activities through consultation with Navajo Nation:

- EPA, Navajo, and New Mexico will meet annually to consult on projects and community involvement for the next fiscal year;
- EPA expects to approve projects for funding annually, following the annual consultation with the Navajo Nation;
- Once the project is approved by approving official (U.S. EPA Associate Director), the project team (and/or their contractors or grantees as appropriate) will prepare a detailed work plan, a cost estimate, and a schedule for the project as a whole and/or the initial component(s) of the project to be completed in the near future;
- After initial approval, funding requests for projects in subsequent years will be based on refined cost estimates derived from current project status and expected future work plans and schedules for each subsequent year; and
- Once a project is approved for funding for a given year, if it appears that the cost of the work will exceed the funding allocated for it that year, EPA Region 6 and 9 case teams will consult on project status and present a recommendation to the approving official whether to allocate additional funding to the project in advance of the next annual funding approval cycle.

- **"Next Steps" Strategic Development Plan** Chip Poalinelli provided a presentation on the following (see power point presentation – *Tronox Settlement Next Steps):*
    - Outlined the proposed "Next Steps" essential for the effective utilization of the anticipated settlement funds to address the contamination at the Tronox NAUM. Through informal and formal consultation, the USEPA and Navajo Nation EPA will continue their ongoing process of prioritizing response actions for the Tronox NAUM and will determine lead responsibility for response action(s) at each Tronox NAUM.
    - These proposed "Next Steps" will be further expanded and priorities will be established through formal and informal consultation with the Navajo Nation, Intra-agency coordination, Inter-agency collaboration, and communication and outreach.
    - Identify a strategy to decide upon projects and implement the next steps.

Questions and Comments

1. Look at weather considerations
2. Develop work plans; look at consistency (i.e. technology used, approached etc.)

- **Wrap-up and Closing (All)**
  - Identify and agree upon next steps for working together (All brainstorming exercise)
    - How do we document our work?
    - How can we make sure everything we do is court defensible?
    - How often do we meet?
    - How do we decide priorities?
    - What do we need to be transparent?
    - How does each agency model?
    - USDA-NRCS soil inventory maps? Interface with database maps.
    - What are the cleanup levels that each agency is using?
    - Data Management – Identify a point of contact for each agency and develop a data management plan.
    - Will Tronox/Anadarko be looking at how we spend the money and what we spend it on?
    - What is the process for identifying project and raising them to the group?
    - Methodology for field scans differ among federal and state agencies 9 Ludlum 222/plus 3x3 probe)
    - What are cleanup and/or action levels?
    - Cooper Aerial Survey Co. – A full service mapping company.

  - Action Items from Meeting #3
    - Write up and distribute meeting notes, presentations, and settlement information (Chip – February 20th)
    - EPA Region 9 will get back to all participants with final decision on project within 10 days
    - If anyone has notes they want Chip to look at, send them to him.
    - Common Interests – Review meeting notes and write up draft list of common interests (Chip/Lisa – Included in these meeting notes)
    - Guiding Principles – Review meeting notes and write up draft list of guiding principles (Chip/Lisa – Included in these meeting notes)

  - Next Meeting and Other Things to Think About
    - Possible agenda topics for the next Tronox meeting.
      - Review draft work plans for projects.
      - Reassessing and balancing with current workload.
      - Identify additional resources (FTE etc.) needed and identify a plan to get them.
      - Consider all factors to identify next steps (remediation verses removal)
    - General concerns as we proceed with AUM work.
      - The number of times an agency comes into a community.
      - New mines and possible contamination.
      - Need for long term monitoring.